

## REMARKS

Claims 1-14 were pending and rejected. Claims 1, 2, 7, 11 and 12 are amended. Claims 8-10 are canceled. Claims 15-30 are new. Support for the amendment of the claims and new claims 15 -30 is found in the claims as filed and throughout the specification, for example in Figure 3E, Figure 9, Figure 17, and paragraphs [0011], [0023], [0030], [0066], [0071] to [0078], [126] and at least in structures 44, 45 and 46. All of the new claims read on the elected species.

The specification has been amended to correct an obvious typographical error. Specifically, the formula of (poly)ethylene glycol has been corrected.

Applicants thank the Examiner for withdrawal of the rejections under 35 USC 102 over *Marks*.

No New Matter is introduced by way of the amendments herein. Reconsideration of claim rejections in light of the amendments and the following remarks is respectfully requested.

### **Claim Rejections under 35 USC 102**

The Examiner has rejected claims 1, 5, 6, 7, 8 and 11-14 under 35 USC 102(b) as allegedly being anticipated by Offord et al (Langmuir 19:761-766).

Without necessarily agreeing with the propriety of the rejection but rather to expedite prosecution of this application, Applicants have amended claim 1 to recite that the MFS has the formula  $-(CH_2)_n-(OCH_2CH_2)_m$ , wherein  $m$  is an integer from 0 to 10, wherein when  $m=0$ ,  $n$  is not 18 as per Offord. . As such, Applicants submit that Offord does not anticipate nor render obvious the claim. Applicants respectfully request the Examiner to withdraw this rejection.

### **Claim Rejections Under 35 USC 103**

Claims 1-14 are rejected under 35 USC 103 as allegedly being obvious in view of Offord in view of Marks et al (US Patent 6,203,758).

However, Applicants submit that the office action has failed to set forth a *prima facie* case of obviousness in view of the combination of these references.

The law is clear that to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 21 USPQ2d 1941 (Fed. Cir. 1992). Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 231 USPQ 375 (Fed. Cir. 1986). Third, the prior art reference, or references when combined, must teach or suggest all the claim limitations. *In re Royka*, 180 USPQ 580 (CCPA 1974).

In affirming the obviousness analysis that it had set forth in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), the Supreme Court has also stated that “[t]here is no necessary inconsistency between the idea underlying the TSM [i.e., teaching-suggestion-motivation] test and the *Graham* analysis.” *KSR Int’l Co. v. Teleflex Inc.*, No. 04-1350, slip op. at 13 (2007). Thus, the Supreme Court has not invalidated the TSM test, but rather only rejected its “rigid” application. *See id.* at 11. An obviousness rejection continues to require an explicit analysis providing some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *See id.* at 14 (citing *In re Kahn*, 411 F.3d 977, 988 (Fed. Cir. 2006)).

Offord discloses asymmetrical alkyl chains. However, as noted by the Examiner, Offord does not disclose “contacting a metallic surface with a nucleic acid or protein capture binding ligand as set forth in claims 2-4; a substituted or heteroalkyl containing MFS insulator, as set forth in claims 9-10.” See p. 4 of the Office Action. However, according to the Examiner, Marks teaches these elements. Applicants respectfully traverse.

Initially, Applicants note, without necessarily agreeing with the propriety of the rejection but rather to expedite prosecution of this application, Applicants have amended claim 1 to recite that the MFS has the formula  $-(CH_2)_n-(OCH_2CH_2)_m$ , wherein  $m$  is an integer from 0 to 10, wherein when  $m=0$ ,  $n$  is not 18. Again, this structure is not disclosed in either of the cited references. As such, Applicants submit that the claims are free of the cited art. That is, the combination of references fails to disclose each element of the claimed method. Moreover, there is no explicit reasoning with some rational underpinning to support legal conclusion of obviousness of the present claims. There is nothing in the cited references that would suggest to the one of skill in the art to modify

the teachings of the reference to arrive at the instant claims. As such, Applicants respectfully request the Examiner to withdraw this rejection.

### **Claim Rejections Under 35 USC 112**

Claims 1-14 are rejected under 35 USC 112, second paragraph as allegedly being indefinite. The Examiner suggested that the “metes and bounds” of the claims was unclear because claim 1 lines 1-3 recites “A method of modifying a metallic surface comprising: contacting the metallic surface with an asymmetric **monolayer forming species** having the formula: MFS-A-A-AG” (emphasis in office action). Yet, Claim 1 line 6 defines “MFS **is a monolayer forming species**” (emphasis in the office action). The Examiner suggests that it is not clear of a monolayer forming species refers to the entire MFS-A-A-AG structure or else just the MFS portion.

Applicants note that claim 1 recites an “asymmetric monolayer forming species”. The specification defines an asymmetric monolayer forming species (AMFS) as:

“AMFS comprise two components, usually linked by a disulfide bridge, at least one of which is a standard monolayer forming species such as an alkyl chain, and the other is a shorter species, for example a shorter alkyl chain or a short branched chain.” See paragraph [0036]. Thus, the AMFS contains two components, one of which is a MFS and one of which is an AG. These are linked by A-A, as defined in the claims and according to the formula in claim 1. Moreover, as amended, claim 1 clarifies that the MFS has a particular formula. Thus, the difference between an asymmetric monolayer forming species and a MFS has been established with clarity. In view of the clarifying comments above and claim amendments herein, Applicants respectfully submit that the claims are clear. Applicants respectfully request the Examiner to withdraw this rejection.

### **Conclusion**

Applicants believe the claims are in a condition for allowance. Early notification thereof is respectfully requested. The Examiner is invited to call the undersigned at 415.442.1000 to resolve any questions.

The Commissioner is authorized to charge any additional fees, including extension fees, that may be required or to credit any overpayment to Deposit Account No. 50-0310 (Docket No. 067456-5036-US01).

Respectfully submitted,

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